

IN THE CLAIMS:

Please amend the claims as follows:

1. (Currently Amended) A method of utilizing a performance monitor cell for distributed optical performance monitoring in a network, comprising:
- selecting a frequency range based on network traffic protocol and transmission rate;
  - tapping a portion of a signal in the network;
  - converting the portion of the signal to a digital signal;
  - sampling a plurality of points in the digital signal continuously at a frequency;
  - determining an average power of the plurality of points;
  - generating a spectrum in frequency domain utilizing a Fast Fourier Transform;
  - generating a noise spectrum density from the spectrum and the frequency range; and
  - calculating an optical signal to noise ratio (OSNR) from the noise spectrum density and the average sampled points, wherein the optical signal noise ratio is used to determine the performance of the network.
2. (Original) The method of Claim 2, further comprising computing an average optical power from a pre-saved calibration table.
3. (Currently Amended) A method of utilizing a performance monitor cell for distributed optical performance ~~monitor~~ monitoring in a network, comprising:
- tapping a portion of a signal in the network and converting the portion of the signal to a digital signal;
  - sampling a plurality of points in the digital signal;
  - calculating a noise spectrum density from a spectrum and a frequency range based on network traffic protocol and transmission rate; and
  - calculating an optical signal to noise ratio (OSNR) from the noise spectrum density and a predetermined calibration data, wherein the optical signal noise ratio is used to ascertain the performance of the network.